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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,406

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Shoriki Narita

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EXAMINER

SNELTING, JONATHAN D

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/537,406	<b>Applicant(s)</b> NARITA ET AL.	
	<b>Examiner</b> Jonathan Snelting	<b>Art Unit</b> 3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 28-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-32, 36, 42-48 and 51-54 is/are rejected.
- 7) ☒ Claim(s) 33-35, 37-41, 49 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 359c (page 89, line 9). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: page 30, line 21 recites "Fig. 19 is a perspective view," but fig. 19 is a side view.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 28-30, 42-47, and 51-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claim 28, it is not clear where the preamble of the claim ends and the elements of the claim begin. Line 7 contains the transitional phrase “comprising.” The examiner will assume that the word “comprising” separates the preamble and the elements of the claim. It is suggested to add a colon after the word “comprising” and to start a new line of text, similar to the format used in applicant’s claim 31.

6. Claims 29 and 30 are indefinite based on dependency to claim 28.

7. Claim 42, line 3 recites “the receiver” and “the receiver elevating unit,” which lack proper antecedent basis in the claims. Claim 40 provides antecedent basis for “the receiver” and “the receiver elevating unit.” It is possible that the applicant intended for claim 42 to depend from claim 40.

8. Claim 54 is indefinite based on dependency to claim 42.

9. Claim 43, line 2 recites “the receiver,” which lacks proper antecedent basis in the claims. Claim 40 provides antecedent basis for “the receiver.” It is possible that the applicant intended for claim 43 to depend from claim 40.

10. Claims 44-47 and 51-53 are indefinite based on dependency to claim 43.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Tateyama et al. (Patent No. 6,152,677), hereafter referred to as Tateyama.

13. Consider claim 28. Tateyama teaches a component feeder (substrate transfer apparatus 2) with a plate placing device (arms 21) that is capable of selectively placing and holding either plate (unprocessed substrate or processed substrate). Tateyama's component feeder (2) is capable of feeding a wafer feeding plate and a tray feeding plate (Tateyama teaches that substrate transfer apparatus 2 can handle both an unprocessed substrate and a processed substrate in column 1, line 66-column 2, line 5). Tateyama's plate placing device is capable of placing and holding a plate (W) so that the feed height of the two types of plates (unprocessed substrate and processed substrate) are approximately equal (see figs. 6-7).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 29-32, 36, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tateyama (Patent No. 6,152,677) in view of Moore (Patent No. 3,766,638).

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16. Consider claim 29. Tateyama teaches an elastic support member (51 and 52), but does not teach a plate pressurizing member and a pressurizing member elevating unit. Moore teaches a plate pressurizing member (collar 11) and a pressurizing member elevating unit (threaded studs 6 and 7) which is capable of varying the support height of the elastic support member (51 and 52) of Tateyama in view of Moore. It would have been obvious to a person having ordinary skill in the art to modify Tateyama's apparatus with Moore's plate pressurizing member and pressurizing member elevating unit in order to allow the plate "to be tightly clamped." (Moore, column 2, line 39)

17. Consider claim 30. Tateyama does not teach a regulation part. Moore teaches a regulation part (collar 5) which is capable of regulating the lowered position of the plate pressurizing member (collar 11). It would have been obvious to a person having ordinary skill in the art to modify Tateyama's apparatus with Moore's regulation part in order to allow the plate "to be tightly clamped." (Moore, column 2, line 39)

18. Consider claim 31. Tateyama teaches a component feeder (substrate transfer apparatus 2) with a plate receiving part (cassette C), a plate placing device (arms 21) that is capable of selectively placing and holding either plate (unprocessed substrate or processed substrate) and that has a plurality of elastic support members (51 and 52), and a plate moving device (main transfer arm 11) that is capable of releasably holding the plate (W). Tateyama's component feeder (2) is capable of feeding a wafer feeding plate and a tray feeding plate (Tateyama teaches that substrate transfer apparatus 2 can handle both an unprocessed substrate and a processed substrate in column 1, line

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66-column 2, line 5). Tateyama's plate placing device is capable of placing and holding a plate (W) so that the feed height of the two types of plates (unprocessed substrate and processed substrate) are approximately equal (see figs. 6-7).

19. Tateyama does not teach a plate pressurizing member, a pressurizing member elevating unit, and a regulation part. Moore teaches a plate pressurizing member (collar 11), a pressurizing member elevating unit (threaded studs 6 and 7) which is capable of varying the support height of the elastic support member (51 and 52) of Tateyama in view of Moore, and a regulation part (collar 5) which is capable of regulating the lowered position of the plate pressurizing member (collar 11). Moore teaches that the wafer (1) is capable of being expanded by lowering the plate pressurizing member (with respect to button 18 when button 18 is raised). It would have been obvious to a person having ordinary skill in the art to modify Tateyama's apparatus with Moore's plate pressurizing member, pressurizing member elevating unit, and regulation part in order to allow the plate "to be tightly clamped." (Moore, column 2, line 39)

20. Consider claim 32. Tateyama does not teach the elements of the wafer feeding plate and does not teach an expanding member. Moore teaches a wafer feeding plate (see fig. 1) with a wafer sheet (2), a diced wafer (1), and a wafer ring (periphery of 2). Moore teaches an expanding member (button 18) with an annular contact portion. Moore teaches that the wafer (1) is capable of being expanded by lowering the plate pressurizing member (with respect to button 18 when button 18 is raised). It would have been obvious to a person having ordinary skill in the art to modify Tateyama's

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apparatus with Moore's wafer feeding plate and expanding member in order to separate the diced wafer.

21. Consider claim 36. Tateyama does not teach a slant end portion in the embodiment of fig. 5, but Tateyama teaches a slant end portion (top of suction pad 101) which contacts the end portion (bottom of W) of the plate and which is capable of regulating a support position of the plate in the embodiment of fig. 31. It would have been obvious to a person having ordinary skill in the art to modify Tateyama's embodiment of fig. 5 with Tateyama's embodiment of fig. 31 in order to both support the plate and hold the plate down with the suction pad 101.

22. Consider claim 48. Tateyama does not teach a plate pressurizing member. Moore teaches a plate pressurizing member (collar 11) with a plurality of support members (collars 5 and 11) capable of supporting the plate and a plurality of urging members (threaded studs 6 and 7) capable of consistently urging the plate against the support members. It would have been obvious to a person having ordinary skill in the art to modify Tateyama's apparatus with Moore's plate pressurizing member, support members, and urging members in order to allow the plate "to be tightly clamped."

(Moore, column 2, line 39)

***Allowable Subject Matter***

23. Claims 33-35, 37-41, and 49-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



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24. Claims 42-47 and 51-54 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is a list of pertinent prior art:

- Sekiya (Patent No. 6,344,402) teaches a method of dicing a workpiece.
- Greene et al. (Patent No. 5,679,055) teach a holding station to receive wafer cassettes of different sizes.
- Byun et al. (Patent No. 6,371,715) teach a robot which handles different sizes of substrates and which loads the substrate to a predetermined position regardless of substrate size.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Snelting whose telephone number is 571-270-7015. The examiner can normally be reached on Monday to Friday 8:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saul Rodriguez can be reached on 571-272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Saúl J. Rodríguez/  
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